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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/067,721	04/28/1998	TAKURO YAMAMOTO	P/3156-3	1544

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EXAMINER

SRIVASTAVA, VIVEK

ART UNIT PAPER NUMBER

2611

DATE MAILED: 06/03/2002

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Handwritten signature

# Office Action Summary

Application No.  
09/067,721

Applicant(s)  
Takuro Yamamoto

Examiner  
Vivek Srivastava

Art Unit  
2611



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Feb 15, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## DETAILED ACTION

### *Claim Rejections - 35 U.S.C. § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, and 4 - 8, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's background in view of George (3,980,959).

Regarding claim 1, Applicant's background discloses a video data transfer system (page 1 lines 8 - 10), a real time output path (page 1 lines 22 - 25, fig 3 item 25) through which video data processed by a video processor (fig 3 item 21) is sent to a display (fig 3 item 16) via a frame buffer (fig 3 item 14), a capturing path (page 2 lines 1 - 6 21 - 38, fig 3 item 27) which is independent of real time output path (fig 3 - capture-only path 27 to FIFO memory 24 and system memory 18 via system bus 17 is separate from real time output path 25 to display 16 via display control circuit 22) and through which video data is sent to a system memory via a system bus (page 2 lines 1 - 6, fig 3 items 17 and 18).

The conventional video data transfer system in Applicant's background fails to disclose the claimed gate in the capturing path. A patent issued to George teaches a television receiver

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comprising two terminals and a gate wherein the gate can be enabled or disabled thereby permitting or preventing signal flow between the terminals (see col 2 lines 46 - 57). It would have been obvious modifying the conventional video transfer system in Applicant's background to include a controllable gate enabling passing or blocking of video data would have prevented the passing of unwanted video data between the video processor and system memory. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the conventional video transfer system in Applicant's background to include the claimed gate to ensure the passing of data between the video processor and system memory only when required.

Considering claim 2, the conventional video transfer system in Applicant's background discloses a real time output path (fig 3 items 21, 14, 25, 16, page 1 lines 19 - 24), a capturing path which is independent of the real time output path (fig 3 items 27, 17, 18, page 2 lines 1 - 6, capturing only path 27 is independent from realtime output path 25), a real time output path comprising an offscreen memory which receives video data from video processor via a data bus and stored video data therein, the offscreen memory being in the frame buffer (fig 3 items 25, 14, 21, 13, 15 page 1 lines 19 - 24), a display control circuit which receives video data from the offscreen memory via the data bus for enlargement and interpolation processing and transfers results to the display (page 1 lines 8 - 24, fig 3 items 22, 13, 25, 16), and a capturing path which comprises a memory means for storing video data for transferring the video data to the system bus (page 2 lines 1 - 6, fig 3 items 24, 17, and 18).

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The conventional video data transfer system in Applicant's background fails to disclose the claimed gate in the capturing path. A patent issued to George teaches a television receiver comprising two terminals and a gate wherein the gate can be enabled or disabled thereby permitting or preventing signal flow between the terminals (see col 2 lines 46 - 57). It would have been obvious modifying the conventional video transfer system in Applicant's background to include a controllable gate enabling passing or blocking of video data would have prevented the passing of unwanted video data between the video processor and system memory. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the conventional video transfer system in Applicant's background to include the claimed gate to ensure the passing of data between the video processor and system memory only when required.

Considering claim 4, the conventional video transfer system in Applicant's background discloses a capture path memory in a capture path (fig 3 item 24). The Applicant's background fails to disclose a capture path memory being connected to a gate and capture path memory being operable to store the video data passed by the gate. As discussed in claim 1, it would have been obvious to include a gate to ensure passing of data between the video processor and system only when required thus preventing unwanted data from reaching the system memory. It would have been obvious connecting the gate as claimed would have ensured passing data to the system memory only when required thus preventing unwanted data from being stored in the capture path memory.

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Considering claim 5, the conventional video transfer system in Applicant's background discloses wherein capture path memory is further effective to transfer the video data to system bus (page 2 lines 1 - 5, fig 3 item 24 and 17).

Considering claim 6, the conventional video transfer system in Applicant's background discloses wherein real time output path comprises an off-screen memory effective to receive video data from the video processor via a data bus and store video data therein (fig 3 - off-screen memory 15 receives video data from video processor 21 via a data bus 13) and offscreen memory is in frame buffer (fig 3 items 14 and 15).

Considering claim 7, the conventional video transfer system in Applicant's background discloses providing video data from video processor to a plurality of paths independent of each other (fig 3 data from video processor is provided to frame buffer data bus path 13 and capture path 27 and real time output path 25), sending video data to a display through a frame buffer in at least one of independent paths operating as a real time output path (fig 3 - data is sent through frame buffer 14 to display 16 via independent real time output path 25, page 1 lines 19 - 24), sending video data to a system memory through a system bus in at least another of independent paths operating as a capture path (fig 3 items 27, 24, 17 and 18, page 2 lines 1 - 6).

The conventional video transfer system in Applicant's background fails to disclose controlling capture path to permit video data to pass to system memory when video data is to be captured. A patent issued to George teaches a television receiver comprising two terminals and a gate wherein the gate can be enabled or disabled thereby permitting or preventing signal flow

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between the terminals (see col 2 lines 46 - 57). It would have been obvious modifying the conventional video transfer system in Applicant's background to include a controllable gate would have enabled controlling the capture path for passing or blocking of video data between the video processor and system memory. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the conventional video transfer system in Applicant's background to include the claimed controlling the capture path to ensure the passing of data between the video processor and system memory only when required.

Considering claim 8, the conventional video transfer system in Applicant's background discloses storing video data in a capture path memory in capture path when video data is permitted to pass to system memory (page 2 lines 1 - 6 and fig 3 items 24, 17, and 18, if data is passed to memory 18 it must first be saved in FIFO 24).

Regarding claim 13, claim 13 recites the same limitations as claim 2 and is therefore rejected on the same grounds as claim 2.

Regarding claim 14, claim 14 recites similar limitations as claim 2 and is rejected on the same grounds as claim 2. Claim 14 further discloses determining whether the video data is to be captured and forwarding the data to the second path which is inherent in the figure 3 of the applicant's background since a determination must be made to route the data to capture path 27 (second path) or realtime output path 25 (first path).

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3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's background in view of George (3,980,959), as applied to claim 2 above, and further in view of Przybyla et al (5,982,781) and Soo (5,570,306).

Considering claim 3, the combination of the Applicant's background and George fails to disclose wherein the memory means transfers stored video data to the system bus when system bus is not occupied by some other unit and when system bus is occupied by some other unit, checks if stored data contains a field delimiter or a frame delimiter and closes said gate to stop data transfer when stored data contains the delimiter and, when the stored data does not contain the delimiter, stores the next video data passing through the gate.

Przybyla teaches by checking if a bus is occupied or not before data transmission, loss of data and re-transmission of data is avoided. It would have been obvious to modify the combination of the Applicant's background and George to check to see if the system bus is occupied by other devices to prevent loss of data or re-transmission of data. Soo teaches a frame delimiter can be used to indicate a buffer overflow condition (col 11 lines 1- 10). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of the Applicant's background and George based on the teachings of Przybyla and Soo to include checking of the system bus as claimed and to include checking the video data stored in the capture path memory for a frame delimiter to ensure data is not lost or would need re-transmission and to prevent an overflow condition in the capture path memory.



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4. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's background in view of George (3,980,959), as applied to claim 8 above, and further in view of Przybyla et al (5,982,781).

Considering claim 9, the Applicant's background and George fail to disclose checking system bus for occupation by other devices connected thereto.

Przybyla teaches by checking if a bus is occupied or not before data transmission, loss of data and re-transmission of data is avoided. It would have been obvious to modify the combination of the Applicant's background and George to check to see if the system bus is occupied by other devices to prevent loss of data or re-transmission of data. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of the Applicant's background and George based on the teachings of Przybyla to include checking of the system bus as claimed to ensure data is not lost or would need re-transmission.

Regarding claim 10, the combination of Applicant's background and George fails to disclose the claimed transferring video data from capture path memory to system memory when system bus is not occupied by other devices connected thereto.

It would have been obvious from the teaches of Przybyla, as discussed in claim 9, checking to see if the system bus is not occupied by another device before transferring data would have avoided data loss and the need for re-transmitting data. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the

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combination of Applicant's background and George to include transferring video data from capture path memory to system memory when system bus is not occupied by other devices connected thereto to avoid data loss and the need for re-transmission.

5. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's background in view of George (3,980,959), and further in view of Przybyla et al (5,982,781) as applied to claim 10 above, and further in view of Soo (5,570,306).

Regarding claim 11, the combination of Applicant's background, George and Przybyla fail to disclose checking video data stored in the capture path memory for at least one of a field and a frame delimiter when the system bus is occupied. Soo teaches a frame delimiter can be used to indicate a buffer overflow condition (col 11 lines 1 - 10). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of the Applicant's background, George and Przybyla to include checking the video data stored in the capture path memory for a frame delimiter to prevent an overflow condition in the capture path memory.

Regarding claim 12, the combination of the Applicant's background, George and Przybyla fail to disclose controlling capture path to prevent video data from being stored in the capture path memory when the capture path memory contains a frame delimiter.

As discussed in claim 11, from the teachings of Przybyla, it would have been obvious to include checking for a frame delimiter to prevent an overflow condition in the capture path

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memory. It would have been obvious to control the capture path to prevent video data from being stored in the capture path memory when the capture path memory contains a frame delimiter to prevent further overflow of the capture path memory.

### ***Response to Arguments***

(1) The applicant argues the capturing path of APA shares at least frame buffer data bus 13 of the real time output path. Therefore, the capturing path is not “independant” of the real time output path as is claimed.

The Examiner respectfully disagrees. Figure 3 specifically depicts a capture path 27 and a realtime output path as 25. These two paths are independent because they are separate and carry data to different destinations. In particular, the real time output path transports data to display 16 and video capture path transmits data to fifo memory 24 and system bus 17.

(2) The applicant argues that there is no motivation shown for combining the gate of George with the structure disclosed in APA - as suggested in the Office Action.

The Examiner respectfully disagrees. Motivation was provided in the office action. As a result, the applicant's arguments are not persuasive.

(3) The applicant argues that the office action does not set forth a prior art reference which shows a memory coupled to a gate as claimed in claim 4. Moreover, the office action does not set forth a motivation for combining such a structure with the teachings of APA.

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The Examiner respectfully disagrees. Motivation was provided in the office action. As a result, the applicant's arguments are not persuasive.

(4) Applicant argues in claim 3, the office action is devoid of a motivation for actually making the asserted combination.

The Examiner respectfully disagrees. Motivation was provided in the office action. As a result, the applicant's arguments are not persuasive.

(5) Applicant argues, with respect to claims 9 and 10, the office action is devoid of a motivation for actually making the asserted combination. Without such a motivation, a prima facie case of obviousness cannot be made.

The Examiner respectfully disagrees. Motivation was provided in the office action. As a result, the applicant's arguments are not persuasive.

(6) Applicant argues, with respect to claims 11 and 12, the office action is devoid of a motivation for actually making the asserted combination. Without such a motivation, a prima facie case of obviousness cannot be made.

The Examiner respectfully disagrees. Motivation was provided in the office action. As a result, the applicant's arguments are not persuasive.

***Conclusion***

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6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CAR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CAR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reddy (6,081,279) - Shared memory graphics accelerator system

Storm et al (5,999,196) - Processing units for graphics accelerator

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

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(703) 308-9051, (for formal communications intended for entry)

**Or:**

(703) 308- 5359 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal  
Drive, Arlington. VA., Sixth Floor (Receptionist).


Any inquiry concerning this communication or earlier communications from the examiner  
should be directed to Vivek Srivastava whose telephone number is (703) 305 - 4038. The  
examiner can normally be reached on Monday - Thursday from 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Andy Faile, can be reached at (703) 305 - 4380.

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the group receptionist whose telephone number is (703) 305 - 3900.

5/29/02

VS

  
ANDREW FAILE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600